

# Robust Monetary Policy and Speed Limit\*

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## Abstract

This paper investigates a robust monetary policy under speed limit policy when a central bank fears its model misspecification. We reveal several points. First, output gap responds cautiously to lagged output gap in robust policy under speed limit policy. The persistence of output gap becomes small and it contributes to lowering the variance of output gap under robust policy. Second, for the robust policy, social losses are lower under the speed limit policy than precommitment. Third, the price of robustness is lower in the speed limit policy than inflation targeting and price level targeting regime. Moreover, it is also lower than precommitment in several cases. The desirability of speed limit policy have been shown in a situation under perfect knowledge. Our results show that the introducing the growth of output gap or output into central bank's objective is effective under delegation when the central bank designs the robust policy if it supposes that the worst possible outcome realizes.

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